Technical Memorandum No. 3

VACANT LAND ANALYSIS

Planning Department
City of Fayetteville
August, 1963

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I. INTRODUCTION

Purpose

The purpose of this memorandum is to provide information on the extent of vacant land that is capable for urban development within the planning area. This information will aid in formulating plans for land use and community facilities.

Scope

The method used to derive this information was a study of the topographic maps (1 inch = 100 feet) that were available for the planning area. All the land on the available topographic maps was classified into one of five basic categories: (1) swampy land; (2) land in depressions; (3) water bodies; (4) land with slopes of 15 per cent or greater; and (5) all other land. Table 1 summarizes these data by planning district. This information was plotted on a map which was presented as Plate 2, page 11, in the Planning Department's report Existing Land Use, June, 1963.

Vacant Land capabilities were derived by subtracting the amount of developed land in each category from the total amount of land in each category. Table 2 summarizes these data.

Water bodies and swampy land cannot be generally developed for urban uses. Therefore, the amount of developable land would be the total vacant land less the vacant land in water bodies and swampy land.

Depressions can generally be developed only after proper drainage is provided. The figures on the amount of land in depressions presented in this memorandum are intended as a guide to the magnitude of this problem in various parts of the planning area.

Land on slopes of 15 per cent or greater in the Fayetteville area can also generally be developed if lot sizes are made large enough. For this reason, the amount of land on such slopes is also provided.

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The method used to derive this information was a study of the topographic map (1 inch = 100 feet) that was available for the planning area. All the land on this available topographic map was classified into one of five land categories: (1) swampy land; (2) land in depressions; (3) water bodies; (4) land with slopes of 15-per centum-or-more; and (5) all other land. Table 1 summarizes these data by planning district. This information was plotted on a map which was presented as Plate 2, page 11, in the Planning Department's report Existing Land Use, June, 1965.

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Land on slopes of 15 per cent or greater in the Fayetteville area can also generally be developed if lot sizes are made large enough. For this reason, the amount of land on such slopes is also tabulated.

II. VACANT LAND ANALYSIS

Swampy Land

The topographic analysis revealed that a total of approximately 730 acres within the planning area were in a swampy condition, and thus were not generally suitable for urban development. About 630 acres of vacant land were swampy, (this was 2 per cent of all the vacant land). Much of the developed land that was classified as swampy was in publicly-owned land on watersheds and elsewhere.

Water Bodies

Water bodies within the planning area (not including the Cape Fear River) covered a total of about 580 acres. About 520 acres of vacant land were in water bodies, again not suitable for urban development. (This represented 1.6 per cent of all the vacant land.)

Depressions

About 280 acres within the planning area were contained within depressions without adequate natural drainage. These areas can be developed; but to do so, they must be provided with adequate storm drainage facilities. Otherwise, each rain might bring with it a small flood within these areas. Nearly 210 acres of this land were vacant. This was .7 per cent of all the vacant land.

15 Per Cent Slope

Land on steep slopes requires special treatment if it is to be developed soundly. Generally speaking, larger-than-average lot sizes must be provided and cutting of streets presents special problems.

There are about 2,020 acres of land that had slopes of 15 per cent or greater. Of this total, nearly 1,430 acres were vacant. (This represented 4.5 per cent of all the vacant land.)

Developable Vacant Land

Developable vacant land represents all the land in the planning area not classified as developed in the 1960 land use survey, less the vacant swampy land and water bodies. There were approximately 30,740 acres of developable vacant land within the planning area in 1960.

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Swampy Land

The topographic analysis revealed that a total of approximately 720 acres within the planning area were in a swampy condition, and thus were not generally suitable for urban development. About 630 acres of vacant land were swampy, this was 2 per cent of all the vacant land. Much of the developed land that was classified as swampy was in publicly-owned land or waterways and elsewhere.

Water Bodies

Water bodies within the planning area (not including the Cape Fear River) covered a total of about 580 acres. About 320 acres of vacant land were in water bodies, again not suitable for urban development. (This represented 1.6 per cent of all the vacant land.)

Depressions

About 200 acres within the planning area were contained within depressions without adequate natural drainage. These areas can be developed, but to do so, they must be provided with adequate storm drainage facilities. Otherwise, each rain might bring with it a small flood within these areas. Nearly 210 acres of this land were vacant. This was .7 per cent of all the vacant land.

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There are about 2,020 acres of land that had slopes of 15 per cent or greater. Of this total, nearly 1,430 acres were vacant. (This represented 6.5 per cent of all the vacant land.)

Developable Vacant Land

Developable vacant land represents all the land in the planning area not classified as developed in the 1960 land use survey, less the vacant swampy land and water bodies. There were approximately 30,740 acres of developable vacant land within the planning area in 1960.

If this developable vacant land were to develop at the overall density (15.8 acres per 100 persons) of development prevalent in the planning area in 1960, nearly 200,000 additional persons could reside within the planning area (bringing the total population to nearly 280,000 persons).

III. SUMMARY AND CONCLUSIONS

The developable vacant land within the planning area could support a population over three times larger than its 1960 population. A larger urban population growth brings a soaring demand for public services (for example: schools, hospitals, recreation outlets, thoroughfare systems, police protection, fire protection, water supply, and sewage disposal). Studied population trends indicate that the population within the planning area could very well double by 1980.

The data provided in this study will be used by the Planning Board and Planning Department to help estimate localized demands for public services with greater confidence, and aid in formulating a land use plan for the community.

TABLE 1

TOPOGRAPHIC ANALYSIS

Planning District	Swampy Land	Water Bodies	Depression	15% Slope	Planning District	Swampy Land	Water Bodies	Depression	15% Slope
1	----	.5	5.0	38.5	21	22.7	18.7	7.0	336.3
2	23.9	6.4	.3	23.1	22	19.3	60.1	6.0	44.7
3	----	.8	2.0	28.9	23	16.7	11.6	.8	18.8
4	----	----	----	2.6	24	24.2	.3	6.2	85.1
5	----	2.0	----	14.2	25	55.8	67.2	3.5	44.8
6	6.8	16.7	----	24.6	26	20.8	41.0	2.5	60.5
7	6.0	7.9	----	24.5	27	.6	8.6	4.3	55.8
8	3.9	22.2	----	44.5	28	----	25.1	.9	54.0
9	----	.3	----	62.1	29	3.2	25.2	5.4	42.4
10	----	5.9	13.0	13.7	30	11.8	.9	31.2	17.5
11	6.0	19.0	22.8	23.2	31	14.4	2.6	12.8	65.4
12	6.4	25.5	1.4	80.8	32	25.0	3.3	33.4	11.8
13	----	----	10.6	----	33	16.2	1.9	5.0	27.9
14	----	----	.2	60.6	34	70.1	25.3	16.2	4.4
15	----	1.2	.3	14.6	35	30.4	2.1	1.2	45.3
16	----	2.0	----	12.1	36	21.5	1.7	12.1	37.9
17	2.5	3.3	4.2	13.8	37	122.6	59.9	50.1	51.4
18	----	3.2	----	11.7	38	122.6	43.2	14.5	272.8
19	16.2	15.9	2.5	62.5	39	30.6	38.8	4.3	46.1
20	----	39.7	.4	61.9	40	33.4	3.0	----	69.0
CBD	----	4.1	----	6.9	TOTAL	661.9	403.6	217.4	1391.9
TOTAL	71.7	176.6	62.7	624.8	GRAND TOTAL	733.6	580.2	280.1	2016.7

TABLE 2

VACANT LAND ANALYSIS
(ACRES)

Planning District	Total Vacant	Swampy Land	Water Bodies	Depression	15% Slope	Developable Vacant
1	273.6	-----	.5	2.7	28.9	273.1
2	259.3	23.9	6.4	-----	15.9	229.0
3	139.0	-----	.8	-----	17.3	138.2
4	122.0	-----	-----	-----	1.3	122.0
5	91.7	-----	2.0	-----	7.4	89.7
6	158.7	6.8	16.7	-----	10.1	135.2
7	129.1	6.0	7.9	-----	2.8	115.2
8	132.0	3.9	22.6	-----	13.6	105.5
9	194.1	-----	.3	-----	12.6	193.8
10	195.4	-----	5.9	9.6	.9	189.5
11	197.1	5.8	18.7	4.6	8.2	172.6
12	717.4	6.4	25.8	1.4	74.5	685.2
13	220.3	-----	-----	7.5	-----	220.3
14	88.7	-----	-----	-----	21.6	88.7
15	244.9	-----	1.2	-----	13.1	243.7
16	217.0	-----	-----	-----	6.9	217.0
17	383.6	1.3	3.3	4.0	10.0	379.0
18	47.0	-----	3.2	-----	1.7	43.8
19	153.2	1.5	15.9	.2	7.5	135.8
20	354.9	-----	34.7	.4	58.3	320.2
CBD	38.9	-----	4.1	-----	4.6	34.8
SUB-TOTAL	4357.9	55.6	170.0	30.4	317.2	4132.3

TABLE 2 (CON'T)

VACANT LAND ANALYSIS
(ACRES)

Planning District	Total Vacant	Swampy Land	Water Bodies	Depression	15% Slope	Developable Vacant
21	937.1	16.9	15.9	.8	210.2	904.3
22	2657.1	19.3	60.0	6.0	44.5	2577.8
23	471.2	16.7	11.6	.8	18.4	442.9
24	929.0	24.2	.3	2.0	83.1	904.5
25	1327.5	3.0	5.0	3.5	20.0	1319.5
26	1250.6	5.7	5.0	2.5	20.0	1239.9
27	1200.8	.1	8.6	4.3	55.8	1192.1
28	988.1	-----	33.8	.9	52.0	954.3
29	1463.3	3.2	25.2	5.4	42.4	1434.9
30	610.2	11.8	.9	30.4	16.6	597.5
31	1019.7	14.1	2.6	12.8	64.1	1003.0
32	777.1	24.1	3.3	24.2	11.8	749.7
33	1196.8	16.2	1.9	5.0	25.8	1178.7
34	1824.6	70.1	25.3	15.4	4.4	1729.2
35	1248.8	29.6	1.2	-----	36.9	1218.0
36	1025.5	21.5	1.7	6.1	28.3	1002.3
37	3354.7	121.7	59.9	47.1	50.1	3173.1
38	2758.2	118.6	43.0	7.9	229.7	2596.6
39	1682.0	30.6	38.8	4.3	44.6	1612.6
40	806.3	24.3	1.8	-----	52.3	780.2
SUB-TOTAL	27528.6	571.7	345.8	179.4	1111.0	26611.1
GRAND TOTAL	31886.5	627.3	515.8	209.8	1428.2	30743.4